Abstract of the Disclosure

A semiconductor device includes a metal interconnection and a metal resistor. The device is made by forming a lower interconnection of copper within an insulating layer, forming a capping layer on the insulating layer to cover and protect the lower interconnection, forming a window in the capping layer to selectively expose a top surface of the lower interconnection, and forming a metal resistor on the capping layer and which contacts the top surface of the lower interconnection through the window. Then an electrical contact is formed in the insulating layer. Alternatively, the metal resistor may be formed on the insulating layer after the electrical contact is formed.